

1 **In the Claims**

2 Claims 1-17, 38-48 and 60-78 have been canceled without prejudice.

3 Claim 80 was amended.

4 Claims 18, 20-25, 27-35, 37, 49-56, and 79-81 are canceled without
5 prejudice.

6 Claims 19, 26, 36, and 57 are currently amended.

7 Claims 19, 26, 36, and 57-59 are listed as follows:

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9 1.-18. (Canceled)

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11 19. (Currently Amended) ~~The A~~ multi-media editing method of claim 18
12 comprising:

13 defining a first data structure that represents a user-defined multi-media
14 editing project;

15 providing a software-implemented matrix switch that is programmable to
16 route multiple switch inputs to multiple switch outputs, at least two of the inputs
17 being capable of competing for a single output during a common time period, the
18 single output being configured to provide a data stream defined by the multi-media
19 editing project;

20 processing the first data structure to provide a second data structure that
21 contains data that can be used to program the matrix switch so that multiple switch
22 inputs are routed to multiple switch outputs; and

23 operating on the second data structure so that no two inputs are routed to
24 said single output during a common time period, wherein said providing of the
25 software-implemented matrix switch comprises providing a switch having virtual

1 input pins and virtual output pins, the virtual input pins being configured to
2 receive individual data streams, the virtual output pins being configured to provide
3 individual data streams.

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5 20.-25. (Canceled)

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7 26. (Currently Amended) ~~The~~^A multi-media editing method of claim
8 ~~23~~comprising:

9 defining a first data structure that represents a user-defined multi-media
10 editing project;

11 providing a software-implemented matrix switch that is programmable to
12 route multiple switch inputs to multiple switch outputs, at least two of the inputs
13 being capable of competing for a single output during a common time period, the
14 single output being configured to provide a data stream defined by the multi-media
15 editing project;

16 processing the first data structure to provide a second data structure that
17 contains data that can be used to program the matrix switch so that multiple switch
18 inputs are routed to multiple switch outputs; and

19 operating on the second data structure so that no two inputs are routed to
20 said single output during a common time period,

21 wherein said processing of the first data structure comprises providing at
22 least one object configured to receive at least one output stream from the matrix
23 switch, process the output stream to provide an input stream, and provide the input
24 stream to an input of the switch, and wherein said object comprises a mix object
25 that is configured to mix multiple audio or video source streams.

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2 27.-35. (Canceled)
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36. (Currently Amended) ~~The A~~ multi-media editing method of claim
35, comprising:

defining a first data structure that represents a user-defined multi-media
editing project;

providing a software-implemented matrix switch that is programmable to
route multiple switch inputs to multiple switch outputs, at least two of the inputs
being capable of competing for a single output during a common time period, the
single output being configured to provide a data stream defined by the multi-media
editing project;

processing the first data structure to provide a second data structure that
contains data that can be used to program the matrix switch so that multiple switch
inputs are routed to multiple switch outputs;

operating on the second data structure so that no two inputs are routed to
said single output during a common time period, wherein said processing of the
first data structure comprises configuring the matrix switch so that it receives
multiple source streams at multiple respective inputs at multiple times, wherein
said configuring comprises building one or more filter graphs that are individually
configured to process digital data to provide multiple respective source streams,
and associating one or more filter graphs with individual inputs of the matrix
switch; and

further comprising building multiple sub-graphs inside one or more of the
filter graphs.

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2 37-56. (Canceled)
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5 57. (Currently Amended) ~~The One or more~~ computer-readable media of
6 ~~claim 55 having computer-readable instructions thereon which, when executed by~~
7 ~~a computer, cause the computer to:~~

8 represent a multi-media editing project as a first data structure;

9 process the first data structure to provide a second data structure containing
10 data that defines an association between inputs, outputs and a time line defined by
11 the editing project;

12 provide a matrix switch having multiple inputs and multiple outputs that
13 correspond to the respective inputs and outputs of the second data structure; and

14 use the second data structure to program routing of the matrix switch's
15 inputs to the matrix switch's outputs for the given time line,

16 wherein the second data structure comprises a grid structure, and

17 wherein the instructions that cause the computer to process the first data
18 structure to provide the second data structure cause the computer to:

19 define a grid row for each of a number of data stream sources;

20 enter data values in each grid row, the data values being associated with a
21 time period for which the data stream source desires to be routed to a primary
22 output of the matrix switch; and

23 change at least one data value in at least a portion of a grid row if a
24 determination is made that another grid row has an entry that indicates that its
25 associated data stream source desires to be routed to the primary output of the
26 matrix switch at the same time.

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2 58. (Original) The computer-readable media of claim 57, wherein the
3 instructions cause the computer to change said at least one data value responsive
4 to a transition that is defined to occur between two data stream sources.

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6 59. (Original) The computer-readable media of claim 57, wherein the
7 instructions cause the computer to change said at least one data value responsive
8 to an effect that is applied on a data stream source.

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10 60.-81. (Canceled)